

**REMARKS**

***Introductory Remarks***

Claims 1, 5, and 8 have been amended as shown in the Listing of Claims section and claim 10 has been added for the Examiner's consideration.. Accordingly, claims 1-9 are currently pending in the application, of which claim 1 is independent.

Applicant respectfully submits that the above amendments do not add new matter to the application and are fully supported by the specification. The table below shows where exemplary support for claim amendments exists in the specification.

Claims	Exemplary Support
1	Page 13, line 20 – Page 14, line 16; Page 6, lines 4-9and Figures 4 and 5
10	Page 13, line 20 – Page 14, line 16; and Figures 4 and 5

Entry of the amendments is respectfully requested. In view of the above amendments and the following remarks, Applicant respectfully requests reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

***Preliminary Matters***

Accompanying this reply is a petition for a three-month extension of time under 37 C.F.R. § 1.136 (a) to respond to the Office Action mailed on February 7, 2006 in connection with the above-identified application. If further extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. § 1.136(a). Filed electronically is the amount of \$510 for the three-month extension of time fee. Please charge any fees required for further extensions of time and credit any overpayment to Deposit Account No. 503310.

***Rejections Under 35 U.S.C. §103***

Claims 1-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 5,886, 313 issued to Krause, *et al.* ("Krause") in view of U. S. Patent No. 5,968,671 issued to Joseph ("Joseph"). Applicants respectfully traverse this rejection for at least the following reasons.

Krause is directed to a laser diode array device for bonding metal plates. With reference to Figure 1 in Krause, the apparatus of Krause utilizes two rollers 5 and 6 to bond together two metal plates 8 and 9 with laser radiation 10 at the joint 3 of the metal plates as the metal plates are passed between the two rollers. See Krause, col. 5, l. 59 – col. 6, l. 47. The end result is a plate that exits the two rollers 5 and 6, and is made up of two metal plates that have been bonded together by a laser. Claim 1, as amended, is directed to an apparatus comprising, among other things, "a compaction device attached to said carriage mechanism so as to permit controlled translational and lateral movement of said compaction device across said surface."

Krause is directed to an apparatus with two rollers and a laser diode array device for bonding metal plates using opposing rollers. The Examiner has taken the position that the rollers of Krause provide a “planar surface.” (Office Action, pages 4-5). This feature has been removed from claim 1 and has been added as dependent claim 10. Therefore, the “surface” recited in claim 1 may be any surface such as planar, curved, or some other complex surface. Claim 1 has been amended to provide an apparatus comprising a compaction device attached to said carriage mechanism so as to permit controlled translational and lateral movement of said compaction device across said surface.” (Emphasis added.) Krause does not teach or disclose an apparatus with “a compaction device attached to said carriage mechanism so as to permit controlled translational and lateral movement of said compaction device across said surface” as recited in claim 1. Similarly, Joseph does not disclose, teach, or suggest these features as recited as claimed in claim 1. Therefore, the combination of these references fails to provide, among other things, “a compaction device attached to said carriage mechanism so as to permit controlled translational and lateral movement of said compaction device across said surface” as claimed in claim 1. For these reasons, Applicant respectfully submits that claim 1 is not obvious over Krause in view of Joseph. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claim 1. Claims 2-6 depend from claim 1 and contain all the limitations of claim 1 by virtue of their dependency. For these reasons that claim 1 is not obvious over Krause in view of Joseph, Applicant respectfully submits that claims 2-6 are not obvious over Krause in view of Joseph. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-6.

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Krause in view of Joseph and further in view of U. S. Patent No. 5,289,966 issued to Izumi (“Izumi”). Izumi is cited for teaching the use of IR reflector lamps for preheating. Like the combination of Krause in view of Joseph, Izumi does not teach the use of “a compaction device attached to said carriage mechanism so as to permit controlled translational and lateral movement of said compaction device across said surface” as claimed in claim 1. Claim 7 is dependent from claim 1. For the reasons set forth above with respect to claim 1, Applicant respectfully submits that claim 1 is not obvious over Krause in view of Joseph and further in view of Izumi and respectfully requests withdrawal of the 35 U.S.C. §103 rejection.

Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Krause in view of Joseph and further in view of U. S. Patent No. 6,046,426 issued to Jeantette (“Jeantette”). Jeantette is cited for teaching the use of an optical pyrometer to provide temperature feedback information to control the laser. Like the combination of Krause in view of Joseph, Jeantette does not teach the use of “a compaction device attached to said carriage mechanism so as to permit controlled translational and lateral movement of said compaction device across said surface” in an apparatus for the consolidation of metal matrix composites. Claim 7 is dependent from claim 1. For the reasons set forth above with respect to claim 1, Applicant respectfully submits that claim 1 is not obvious over Krause in view of Joseph and further in view of Jeantette and respectfully requests withdrawal of the 35 U.S.C. §103 rejection.

Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Krause in view of Joseph and further in view of U. S. Patent No. 4,779,563 issued to Ishikawa ("Ishikawa"). Ishikawa is cited for the teaching to apply vibratory energy to the prepreg tape. Like the combination of Krause in view of Joseph, Ishikawa does not teach the use of a "a compaction device attached to said carriage mechanism so as to permit controlled translational and lateral movement of said compaction device across said surface" as recited in claim 1. Claim 9 is dependent from claim 1. For the reasons set forth above, Applicants respectfully submits that claim 9 is not obvious over Krause in view of Joseph and further in view of Ishikawa and respectfully requests withdrawal of the 35 U.S.C. §103 rejection.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-9. Since the none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicants respectfully submit that independent claim 1, and all the claims that depend therefrom are allowable.

***Conclusion***

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution. Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,



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